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Tuna Newsletter

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- Southwest Region
- Southwest Fisheries Science Center

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U.S. TUNA STATISTICS

Editor's note: The following articles were prepared by NMFS personnel from data and information gathered from sources in the U.S. tuna industry. (A. Jackson)

U.S. CANNED TUNA INDUSTRY HIGHLIGHTS, THIRD QUARTER 1991

Total receipts of tuna by U.S. canners during the third quarter of 1991 (July-September) increased by 19% to the equivalent of 117,700 short tons (st) of whole fish (round weight), compared to third quarter 1990 (Table 1). Receipts for the first three quarters of 1991 totaled 351,400 st, an increase of 3% from the previous year (Table 2). Skipjack receipts were up 78% for the quarter and up 40% for the first three quarters of the year, while yellowfin and albacore receipts were down 35% and 22%, respectively, for the quarter and down 23% and 25% for the first three quarters. Although the vast majority of tuna received by U.S. canners is whole fish, some quantity of tuna is received as loins or gilled-and-gutted. The ratio of tuna loins to total receipts for the third quarter of 1991 was 7% compared to 11% for 1990. Receipts of tuna loins for the first three quarters of 1991 totaled 26,000 st, up 14% from the previous year. [The round weight totals used above were approximated by converting weights of loins and gilled-and-gutted receipts by factors of 2.25 and 1.11, respectively. For the remainder of this article, unconverted receipts are used unless otherwise stated.]

Receipts of tuna in American Samoa and California for the third quarter of 1991 were up 37%, compared

Table 1. Total U.S. cannery receipts (st) by classification of tuna for the third quarters of 1990 and 1991. Totals may not add due to rounding.

Jul-Sep	Type	Albacore	Skipjack	Yellowfin[1]	TOTAL
1990	ROUND	16,000	35,000	23,200	74,300
	GILLED & GUTTED	0	0	2,400	2,400
	LOIN	4,400	4,000	1,500	9,800
	TOTAL (as received)	20,400	39,000	27,100	86,500
	TOTAL (estimated round weight)[2]	25,900	43,900	29,200	99,000
1991	ROUND	20,300	64,200	15,700	100,100
	GILLED & GUTTED	0	0	800	800
	LOIN	*	6,300	1,200	7,400
	TOTAL (as received)	20,300	70,400	17,600	108,300
	TOTAL (estimated round weight)[2]	20,300	78,300	19,100	117,700

*Less than 100 st reported for this category.

[1]May include a small amount of bigeye tuna.

[2]Converted to round weight by using factors of 1.11 for gilled-and-gutted and 2.25 for loins.

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Table 2. Total U.S. cannery receipts (st) by classification of tuna as received by packers for the first three quarters of 1990 and 1991. Totals may not add due to rounding.

Jan-Sep	Type	Albacore	Skipjack	Yellowfin[1]	TOTAL
1990	ROUND	67,900	115,000	102,600	285,400
	GILLED & GUTTED	0	0	4,400	4,400
	LOIN	7,100	12,500	3,100	22,800
	TOTAL (as received)	75,100	127,500	110,100	312,600
	TOTAL (estimated round weight)[2]	84,000	143,100	114,500	341,600
1991	ROUND	54,500	160,400	74,600	289,600
	GILLED & GUTTED	0	0	3,100	3,100
	LOIN	3,600	18,000	4,300	26,000
	TOTAL (as received)	58,200	178,500	82,000	318,600
	TOTAL (estimated round weight)[2]	62,700	201,000	87,700	351,400

[1]May include a small amount of bigeye tuna.

[2]Converted to round weight by using factors of 1.11 for gilled-and-gutted and 2.25 for loins.

Table 3. U.S. cannery receipts (st) of domestic and imported tuna by species for the third quarters of 1990, 1991 and the recent (1986-90) third quarter averages. Totals may not add due to rounding.

Jul-Sep	Source	Albacore	Skipjack	Yellowfin[1]	TOTAL
	AMERICAN SAMOA & CALIFORNIA				
1990	DOMESTIC	2,100	11,600	10,900	24,700
	IMPORTED	13,100	4,400	2,400	19,900
	TOTAL	15,200	16,000	13,300	44,500
1991	DOMESTIC	900	37,800	3,800	42,500
	IMPORTED	6,900	10,000	1,600	18,500
	TOTAL	7,800	47,700	5,400	61,000
1986-90 Average	DOMESTIC	1,600	17,600	13,600	32,700
	IMPORTED	9,100	7,000	3,000	19,100
	TOTAL	10,700	24,600	16,600	51,800
	PUERTO RICO				
1990	DOMESTIC	0	8,200	9,200	17,400
	IMPORTED	5,300	14,700	4,600	24,500
	TOTAL	5,300	22,900	13,700	41,900
1991	DOMESTIC	0	4,000	2,100	6,000
	IMPORTED	12,500	18,700	10,100	41,400
	TOTAL	12,500	22,700	12,200	47,400
1986-90 Average	DOMESTIC	300	5,500	15,000	20,900
	IMPORTED	15,500	18,900	13,700	48,100
	TOTAL	15,900	24,400	28,700	68,900
	TOTAL				
1990	DOMESTIC	2,100	19,900	20,100	42,100
	IMPORTED	18,300	19,100	7,000	44,400
	TOTAL	20,400	39,000	27,100	86,500
1991	DOMESTIC	900	41,700	5,800	48,500
	IMPORTED	19,400	28,700	11,800	59,800
	TOTAL	20,300	70,400	17,600	108,300
1986-90 Average	DOMESTIC	1,900	23,100	28,600	53,600
	IMPORTED	24,600	25,900	16,700	67,100
	TOTAL	26,500	49,000	45,200	120,700

[1]May include a small amount of bigeye tuna.

to third quarter 1990, driven by a large increase in skipjack receipts (Table 3). Receipts in Puerto Rico were up by 13% largely as a result of a 136% increase in albacore receipts. Domestically-caught deliveries to canneries in Puerto Rico were down by 66%, while the domestic component of deliveries to American Samoa/California was up 72%. This is largely a result of a reduction in size and partial relocation of the U.S. tropical tuna purse seine fleet from the eastern tropical Pacific to the western Pacific. Twenty U.S. purse seiners were active in the eastern Pacific fishery during the third quarter of 1990 compared to only 10 in 1991, while in the western Pacific the number of U.S. purse seiners increased to 40 from 35. Skipjack was by far the largest component of all domestic deliveries at 41,700 st, followed by yellowfin, 5,800 st, and albacore, 900 st. Imports accounted for 57% of the tuna delivered to U.S. canners (Table 4).

Based on U.S. cannery receipts through October 1991, projected 1991 year-end receipts should reach approximately 432,000 st, up 5% from the 1990 total (Table 5). Skipjack receipts should be up approximately 45% for the year, while yellowfin and albacore receipts will probably each end the year down about 25%. Imports should account for approximately 54% of the tuna delivered to U.S. canners in 1991.

Skipjack was the leading import for the third quarter of 1991 at 28,700 st, followed by albacore, 19,400 st, and yellowfin, 11,800 st (Table 6). The leading supplier was Taiwan, with 30% of the import market, followed by Japan and Spain, each with about 13% of the market. The western Pacific Ocean was the main source of all three important tuna species in U.S. cannery receipts (Table 7): skipjack (49,500 st), albacore (11,100) and yellowfin (5,600 st).

Table 4. U.S. cannery receipts (st) of domestic and imported tuna by species for the first three quarters of 1990, 1991 and the recent (1986-90) averages. Totals may not add due to rounding.

Jan-Sep	Source	Albacore	Skipjack	Yellowfin[1]	TOTAL
1990	DOMESTIC	6,500	63,300	74,600	144,400
	IMPORTED	68,500	64,200	35,500	168,200
	TOTAL	75,100	127,500	110,100	312,600
1991	DOMESTIC	5,900	95,400	34,300	135,700
	IMPORTED	52,200	83,100	47,700	182,900
	TOTAL	58,200	178,500	82,000	318,600
1986-90 Average	DOMESTIC	4,200	74,100	94,100	172,400
	IMPORTED	76,400	79,200	52,600	208,200
	TOTAL	80,600	153,300	146,700	380,600

[1]May include a small amount of bigeye tuna.

Table 5. U.S. cannery receipts (st) of domestic and imported tuna by species for 1990, October 1991 and projected 1991 year-end totals. Totals may not add due to rounding.

Period	Source	Albacore	Skipjack	Yellowfin[1]	TOTAL
1990	DOMESTIC	6,900	95,500	92,500	194,900
	IMPORTED	87,900	83,700	43,900	215,600
	TOTAL	94,900	179,200	136,400	410,500
1991 October	DOMESTIC	100	19,300	3,500	22,900
	IMPORTED	7,500	11,100	3,600	22,200
	TOTAL	7,700	30,400	7,100	45,100
1991 Projected Total	DOMESTIC	6,000	149,000	43,000	198,000
	IMPORTED	65,000	110,000	59,000	234,000
	TOTAL	71,000	259,000	102,000	432,000

[1]May include a small amount of bigeye tuna.

Table 6. U.S. cannery imports (st) of tuna by species[1] and source (flag of catcher vessel) for the third quarter of 1991. Totals for the third quarter of 1990 are given for comparison. Note that the flag of the catcher vessel does not necessarily reflect the country of export or point of shipment. Totals may not add due to rounding.

COUNTRY	1991				1990
	ALB	SKJ	YFT[2]	TOTAL	TOTAL
AUSTRALIA	0	1,000	*	1,000	500
ECUADOR	0	1,500	1,600	3,100	3,100
FRANCE	700	3,300	1,900	5,900	4,400
GHANA	0	6,100	900	7,000	5,600
JAPAN	4,700	2,400	1,100	8,200	3,000
NEW ZEALAND	300	100	0	400	*
PANAMA	500	500	900	2,000	200
SAINT VINCENT	0	400	*	400	0
SOUTH KOREA	500	2,700	900	4,100	7,000
SPAIN	400	5,800	1,700	7,900	2,100
TAIWAN	11,800	4,100	2,200	18,000	12,800
U.S.A.	0	300	*	300	0
VANUATU	0	300	0	300	1,300
VENEZUELA	0	200	400	600	700
OTHER	400	100	100	600	500
UNKNOWN	0	0	0	0	3,100
TOTAL (as received)	19,400	28,700	11,800	59,800	44,400
TOTAL (estimated round wt)[3]	19,400	36,500	13,300	69,200	68,000

*Less than 100 st reported for this category.

[1]ALB=albacore; SKJ=skipjack; YFT=yellowfin.

[2]May include a small amount of bigeye tuna.

[3]Converted to round weight by using factors of 1.11 for gilled-and-gutted and 2.25 for loins.

Contract prices for domestically caught tuna delivered to U.S. canners in the third quarter of 1991 were lower on average than 1990 prices for all size categories of fish (Table 8). U.S. imports of canned tuna packed in water totaled 41,300 st for the third quarter of 1991, 128,700 st for the first three quarters of the year and 155,400 st at year's end, up 22% from 1990.

U.S. TUNA FISHERIES UPDATE

EASTERN PACIFIC PURSE SEINE FISHERY

In 1991, 16 U.S. purse seiners caught an estimated 21,900 metric tons (mt) of yellowfin tuna and 11,700 mt of skipjack tuna in the eastern tropical Pacific (Figure 1). The yellowfin catch was down 59% from the 1990 catch (52,900 mt), while the skipjack catch was up 1% from the 1990 catch (11,600 mt). The differences in the catches in 1991 were largely the result of a reduction in the size of the U.S. fleet and the concentration of effort by the remainder of the fleet on non-dolphin-associated fish. At the end of 1991 the number of active U.S. purse seiners in the eastern Pacific fishery stood at 10 compared to 15 for 1990. U.S. canners' policy of not purchasing tuna caught in association with dolphins is the primary cause for this reduction in the U.S. fleet.

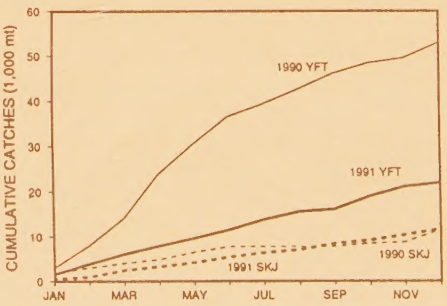

Figure 1. Cumulative tuna catches, by month, for the U.S. eastern Pacific purse seine fishery, 1990 and 1991.

WESTERN PACIFIC PURSE SEINE FISHERY

During the period January through September 1991, 41 U.S. purse seiners landed an estimated 127,500 mt of skipjack tuna and 32,900 mt of yellowfin tuna in the western Pacific (Figure 2). Skipjack landings were up 60% from 1990 landings (79,500 mt) for the same period, and yellowfin landings were down 23% from 1990 landings (42,900 mt). The fleet continues to grow as displaced U.S. purse seiners from the eastern Pacific tuna fishery switch to the western Pacific fishery. Projected to year's end, the U.S. fleet should land approximately 168,000 mt of skipjack and 34,000 mt of yellowfin in 1991.

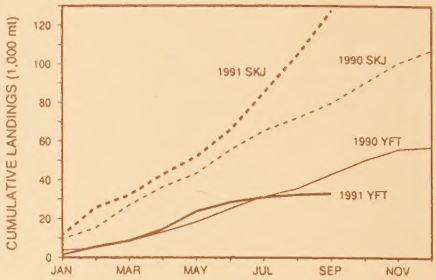

Figure 2. Cumulative tuna landings, by month, for the U.S. western Pacific purse seine fishery, 1990 and 1991.

Table 7. Receipts (st) of tuna by U.S. canneries by species[1] and area of capture for the third quarters of 1990 and 1991. Totals may not add due to rounding.

SOURCE	1990			1991		
	ALB	SKJ	YFT[2]	ALB	SKJ	YFT[2]
E. ATLANTIC OCEAN						
DOMESTIC	0	0	0	0	0	0
IMPORTED	3,200	5,200	400	3,000	8,900	2,800
TOTAL	3,200	5,200	400	3,000	8,900	2,800
W. ATLANTIC OCEAN						
DOMESTIC	0	0	0	0	200	300
IMPORTED	1,800	300	*	3,300	100	600
TOTAL	1,800	300	*	3,300	200	900
E. PACIFIC OCEAN						
DOMESTIC	2,100	900	7,100	900	1,300	3,200
IMPORTED	0	1,700	2,800	0	2,000	2,000
TOTAL	2,100	2,600	9,900	900	3,300	5,200
W. PACIFIC OCEAN						
DOMESTIC	*	19,000	13,000	*	40,200	2,400
IMPORTED	11,600	6,400	2,800	11,000	9,300	3,300
TOTAL	11,600	25,400	15,800	11,100	49,500	5,600
INDIAN OCEAN						
DOMESTIC	0	0	0	0	0	0
IMPORTED	1,700	5,500	900	2,000	8,500	3,100
TOTAL	1,700	5,500	900	2,000	8,500	3,100

*Less than 100 st reported for this category.

[1]ALB=albacore; SKJ=skipjack; YFT=yellowfin.

[2]May include a small amount of bigeye tuna.

Table 8. Contract price ranges (U.S. $ per st) for skipjack and yellowfin tuna for delivery to U.S. canneries in American Samoa and Puerto Rico by U.S. vessels arriving from trips in third quarter 1990 and 1991.

SIZE CLASS (lbs.)	SKIPJACK		YELLOWFIN	
	1990	1991	1990	1991
<3	300-420	250-397.50	300-420	250-397.50
3 to 4	495-620	450-597.50	495-620	450-597.50
4 to 7.5	700-820	645-792.50	700-820	645-792.50
7.5 to 20	785-895	710-857.50	810-910	720-867.50
20	——	——	910-1,075	775-922.50

NORTHERN PACIFIC ALBACORE FISHERY

The 1991 U.S. north Pacific albacore season came to a close in late October. Total catch for the season was 1,625 mt, compared to 2,818 mt in 1990. The 1991 total represents the poorest season on record.

SOUTHERN PACIFIC ALBACORE FISHERY

The 1991-92 south Pacific albacore troll season commenced in December 1991 and will continue into April or May 1992. Fishing success thus far has been moderate for the approximately 40 vessels that started the season. It is expected that by the end of the season over 65 vessels (mostly U.S.) will have participated in the fishery.

ATLANTIC BLUEFIN TUNA FISHERY

The U.S. Atlantic bluefin tuna fishery is regulated with an ICCAT annual catch quota of 1,387 mt. As of December 2, the total commercial landing for 1991 stood at 1,105 mt, down 8% from the 1990 commercial landing (1,068 mt) for the same period.

Gary Rensink and Laura Halko, SWFSC, and Kathi Rodriques, NMFS Northeast Region, contributed information for this article on fisheries update.

REPORTS

Editor's note: Original reports are published as a service to subscribers and may not represent the views of the NMFS. Readers should contact the authors of reports for details, if needed.

The following overview and update of a phenomenon increasingly in the news is particularly timely. (D. Au)

EL NIÑO, A FREQUENT VISITOR IN THE PAST 450 YEARS

Forrest R. Miller, Inter-American Tropical Tuna Commission, 8604 La Jolla Shores Drive, La Jolla, CA 92037

EL NIÑO EPISODES OF THE PAST

Prior to the International Geophysical Year (IGY), 1957-58, El Niño was not known outside of the tropics to be a frequent environmental event and it did not receive much publicity in the world press or literature. During the IGY, however, a strong El Niño developed with very severe effects on bird life, on fisheries and on the ocean environment in the eastern tropical Pacific (ETP), especially along the coasts of Ecuador and Peru. Recently, Dr. William Quinn of Oregon State University compiled a detailed chronology of El Niño episodes in the ETP dating back to the second decade of the 16th century when Spanish exploration flourished. Quinn identifies eight strong El Niño events which occurred during the 1500s, the first starting in 1525. During the 1600s there were 11 strong or very strong El Niño events and in the 1700s 10 strong or very strong events occurred. Throughout the 19th century 10 strong or very strong El Niño events developed.

During this century there have been 20 strong or moderately strong El Niño events and two very strong events, in 1925-26 and 1982-83. The 1982-83 El Niño was the strongest and the most extensive event recorded so far this century. The very strong El Niño events usually have a duration of 18 to 24 months, with sea surface temperatures (SST) reaching more than 4°C above normal and adversely influencing sea life for more than two years over most of the eastern Pacific Ocean. The moderate to strong events usually last about one year with SSTs becoming 2-4°C above normal. Adverse effects on the fishery may persist for 12 to 18 months. Quinn also lists 5 weak El Niño events which occurred between 1905 and 1951. These had durations of less than a year, were confined primarily to the equatorial region and had SSTs less than 3°C above normal. The weak El Niño events resulted in minimal effects on sea life and ocean environment.

THE PHENOMENON

Today El Niño is better understood as just one manifestation of abnormal patterns in the global atmospheric and oceanic circulations leading to deeper than normal thermoclines and mixed layer depths (MLD), above normal SSTs and above normal sea levels in the ETP. These are related to significant modifications in the ocean currents that result from a marked weakening in the strength of surface winds in the tropical Pacific. There is also a marked decrease in the nutrients in the upper mixed layer of the sea, leading to a depletion of forage and probably a redistribution of food by the altered ocean currents. The height of sea level and depth of the thermocline in the ETP are inversely correlated with the strength of the surface easterly winds over the tropical Pacific. An important measure of the strength of the tropical wind circulation is the Southern Oscillation Index (SOI) which is the difference between the standardized sea-surface pressure (SSP) of Darwin, Australia, (12°S) and Tahiti, French Polynesia (17°S).

To fishermen and coastal villagers from Colombia to southern Peru, El Niño, the phenomenon, has meant unusually warm coastal waters, red tides, torrential rains with floods and very poor coastal fishing, all reaching a peak during the Christmas Season. This seasonality has created the popular belief that "El Niño" refers to the Christ Child. This association seems somewhat uncharacteristic, however, because Christmas is usually a time of rejoicing and celebration while during El Niño the heavy rains, flooding and poor fishing conditions create unusual hardships. It is more probable that "El Niño" originated from reference to the weak, south-setting current that develops along the coast of Ecuador and Peru during El Niño which, in the early days, mariners called *Corriente del Niño*. This current flows southward along the coast counter to the Peru Current (Humboldt) with less nutrient enrichment, and it is most pronounced during moderate to strong El Niño events.

EL NIÑO EPISODES OF THE EARLY 1990s

As the final decade in the 20th century began, the strong anti-El Niño which occurred during 1988 and 1989 came to an end marked by near normal SSTs over most of the ETP in the first quarter of 1990. During the second quarter of 1990, however, in the offshore region along the equator between 90°W and 110°W, above normal SSTs indicated that upwelling remained weak. At coastal stations of Peru SSTs were near or slightly above normal.

During those first and second quarters of 1990 the MLD and the thermocline became deeper than normal, sea level rose in the coastal areas of central and South America

and the SOI became negative, reflecting a weaker than normal surface wind circulation. During the third and fourth quarters, however, these environmental parameters returned toward normal again and El Niño development ceased. By the end of 1990 the thermocline had deepened 10 to 20 meters and there was a gradual rise in sea level to above normal once again. The SOI was becoming negative, also, as it had earlier in the year. However, there were no large areas where positive SST anomalies were more than 1°C above normal except in some small areas along the equator east of 150°W.

The warming trend over the eastern tropical Pacific that began in 1990 continued during the first and second quarters of 1991. Because there was a gradual and prolonged warming in the upper mixed layer of the equatorial part (5°N to 10°S) of the ETP, the heat content above the thermocline had become high enough during the first quarter of 1991 to trigger El Niño conditions and sustain the episode, provided the Southern Oscillation Index remained negative during most of 1991. During the first quarter of 1991 the SOI was -0.5 (averaged over three months) and ocean conditions were similar to those during the fourth quarter of 1990, i.e., sea level was slightly above normal and the thermocline was about 20 m deeper than normal in the equatorial area east of 140°W. SSTs were above normal over most of the ETP. The second quarter of 1991 was characterized as slowly developing El Niño conditions in the equatorial part of the ETP.

By the mid-point of the third quarter, however, further development of El Niño was curtailed. The SOI increased from -1.5 in May to -0.5 during the first half of the third quarter indicating a slight strengthening of the surface winds over the southern tropical Pacific. Sea level became normal along much of the coast of South America, and the thermocline moved upward closer to the surface in equatorial waters. Recent volcanic eruptions in the Philippines (Mount Penitubo in June 1991) may have contributed to keeping SSTs from becoming warmer than expected, especially in the ETP north of 5°N (See IATTC Quarterly Report for July-September 1991).

During the fourth quarter of 1991 SSTs were greater than 1°C above normal across nearly all of the equatorial (5°N to 10°S) region of the ETP, and several areas with SSTs greater than 2°C above normal appeared along the equator. The SOI decreased to -1.2 between October and November. During the same period sea level rose to several centimeters above normal at Baltra in the Galapagos Islands and also from La Libertad to Callao, Peru. In addition the thermocline descended again to approximately 40 m deeper than normal along the equator east of 115°W. During this quarter the El Niño was affecting the west coast of South America where SSTs became more than 1°C above normal on an average from Ecuador to northern Chile.

By the end of the fourth quarter of 1991 there were no indications from the monitored environmental parameters that El Niño was going to dissipate before the end of the first quarter of 1992. There is a question, however, concerning whether there will be a northward expansion to the coasts of Mexico and Central America of this warm water episode before the end of the 1991-1992 austral summer. If El Niño conditions do not extend northward beyond 10°N before the end of the first quarter 1992, it is likely that the tuna fishing activity in the Commission Yellowfin Regulatory Area (CYRA) north of 10°N will be no more affected by this El Niño in 1992 than it was during 1991. For additional information concerning the effects of El Niño on the tuna fishery in the ETP, refer to IATTC Annual Reports for 1987, 1988, 1989, and 1990.

RECENT DEVELOPMENTS IN TUNA FISHERIES

Editor's note: The following news items, compiled from fishery trade and industry journals, newspapers and NMFS reports, are provided only as a service to our readers. The NMFS does not guarantee their accuracy.

UNITED STATES

Atchison Replaces Felando at ATA–The American Tunaboat Association hired Richard C. Atchison as executive director, to replace August Felando, who retired in August 1991. Atchison, a Los Angeles native, was named president and chief executive officer of Mitsubishi Foods in 1982. Before that he worked for Van Camp Seafood, a division of Ralston Purina Co. He graduated from the University of California at Los Angeles, School of Business and Economics. (*Pacific Fishing*, January 1992)

WESTERN PACIFIC OCEAN

Taiwanese Longliners Switch to Albacore–A large number of Taiwanese sashimi longliners have changed to albacore fishing in view of the depressed market conditions for sashimi in Japan and the firm demand and prices for albacore on the world market. Supplies of albacore have dropped drastically since the ban on the use of drift nets. Over the last months many sashimi boats were forced to stay in Japanese ports for prolonged periods awaiting unloading. It is expected that most of the albacore will be unloaded in Thailand for canning and/or loining. (INFOFISH *Trade News*, 2 December 1991)

1992 TUNA MEETINGS

(Organizer; meeting type: sci=science, adm=administration)

- FEB 5-6. Japan Tuna Conference. Shimizu, Japan. (National Research Institute of Far Seas Fisheries; sci)
- FEB 11-14. International Workshop on Fishing for Tunas Associated with Floating Objects. La Jolla, CA, U.S.A. (Inter-American Tropical Tuna Commission; sci)
- MAY 18-21. 43rd Tuna Conference, "Tuna Fisheries and Ecological Interactions." Lake Arrowhead, CA, U.S.A. (Southwest Fisheries Science Center and IATTC; sci)
- JUN 16-18. Annual Meeting of the IATTC. La Jolla, CA, U.S.A. (IATTC; adm)
- JUL 22-29. Atlantic Billfish Workshop. Miami, FL, U.S.A. (International Commission for the Conservation of Atlantic Tunas; sci)
- SEP 22-29. Atlantic Swordfish Stock Assessment Workshop. Madrid, Spain. (ICCAT; sci)
- OCT 6-9. Atlantic Albacore Stock Assessment Workshop. Madrid, Spain. (ICCAT; sci)
- OCT 26-30. East Atlantic Bluefin Stock Assessment Workshop. Madrid, Spain. (ICCAT; sci)
- NOV 2-6. Standing Committee on Research and Statistics (SCRS) ICCAT Plenary Sessions. Madrid, Spain. (ICCAT; sci)
- NOV 9-14. 8th Special Meeting of ICCAT. Madrid, Spain. (ICCAT; adm)

EASTERN ATLANTIC OCEAN

Guinea Bissau-EC Fisheries Agreement--The European Community and Guinea Bissau signed a two-year fisheries protocol on 7 October 1991. In force from 16 June 1991 to 15 June 1993, the protocol reduces the number of tuna fishing vessels and longliners by 66% to 32 vessels, down from 95 vessels permitted to fish within the 200-mile fishery zone by the previous protocol. The new agreement--which also covers prawns, squid and other fish--requires the EC to pay $15.6 million over two years. An additional $1.1 million will be paid by the EC to finance Guinea Bissau national scientific programs, and $650,000 to finance research grants in the fisheries sector. (NMFS Office of International Affairs, *Latest Developments in African and Middle Eastern Fisheries*, October-December 1991)

Senegal-Japan Fisheries Agreement-- After two years of talks, the Senegalese government awarded Japanese fishermen the right to fish for deep water tuna "which neither European nor Senegalese vessels are equipped to catch." In return, the Japanese have promised to deliver the catch of two tuna vessels for Senegalese canneries and to contribute $7 million for the construction of a central fish market in Dakar. (NMFS Office of International Affairs, *Latest Developments in African and Middle Eastern Fisheries*, October-December 1991)

WESTERN ATLANTIC OCEAN

Western Atlantic Bluefin Tuna Management Action--Harvest of western Atlantic bluefin tuna will be slightly lower in 1993 as a result of actions taken at the November 1991 meeting of the International Commission for the Conservation of Atlantic Tunas (ICCAT) in Madrid, Spain. The Commission adopted recommendations for the more effective management of the western Atlantic bluefin tuna which included a 10% reduction in the 1991 scientific monitoring quota of 2,660 mt for 1992 and 1993. The Commission also approved a 25% reduction from the 2,660 mt quota for 1994 and 1995 with the proviso that the catch limits in 1994 or in 1996 will return to the 1991 level if further analysis of data support such an increase. The distribution of the quota among the three countries--Japan, Canada and the United States--is to be taken in the same proportion as previously agreed, and a special western Atlantic bluefin tuna management review committee consisting of these three countries will meet in early 1992 to consider a possible reduction of the fishing level to 50% of the 1991 quota to allow for a more rapid rebuilding of the stock. (NMFS Office of International Affairs, *Weekly Highlights*, 11-15 November 1991)

INDIAN OCEAN

British Chagos Islands to Declare 200-Mile Fishery Zone--The British Chagos Archipelago in the Indian Ocean (south of the Maldives) planned to declare a 200-mile fishery zone effective 1 October 1991. The waters in the vicinity of the Chagos Islands are noted to be good yellowfin and bigeye tuna fishing grounds. It is expected to have an impact on the fishing operations of various distant water fishing nations' longliners and purse seiners. (Forum Fisheries Agency, *News Digest*, November-December 1991)

43RD TUNA CONFERENCE ANNOUNCED

The 43rd Tuna Conference will be held May 18-21, 1992, at the University of California's Lake Arrowhead Conference Center, Lake Arrowhead, California. The Tuna Conference is sponsored annually by U.S. National Marine Fisheries Service and the Inter-American

Tropical Tuna Commission. This international meeting of scientists provides an opportunity to present and discuss current topics in tuna and billfish research. The theme for this year's conference is "Tuna Fisheries and Ecological Interactions."

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